Coast Guard, DHS

§ 172.090

(h) Buoyancy of superstructure. For the purpose of paragraph (b) of this section, the buoyancy of any superstructure directly above the side damage is to be disregarded. The unflooded parts of superstructures beyond the extent of damage may be taken into consideration if they are separated from the damaged space by watertight bulkheads and no progressive flooding of these intact spaces takes place.

Table 172.065(a)—Extent of Damage

<table>
<thead>
<tr>
<th>Collision Penetration</th>
<th>Longitudinal extent</th>
<th>Transverse extent</th>
<th>Vertical extent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.495L&lt;sup&gt;2/3&lt;/sup&gt; or 47.6 feet (14.5m) whichever is shorter.</td>
<td>B/6 or 37.74 feet (11.5m) whichever is shorter.</td>
<td>From the baseline upward without limit.</td>
</tr>
</tbody>
</table>

Grounding Penetration at the forward end but excluding any damage aft of a point 0.3L aft of the forward perpendicular

<table>
<thead>
<tr>
<th>Longitudinal extent</th>
<th>Transverse extent</th>
<th>Vertical extent from the baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.495L&lt;sup&gt;2/3&lt;/sup&gt; or 47.6 feet (14.5m) whichever is shorter.</td>
<td>B/6 or 32.81 feet (10m) whichever is shorter but not less than 16.41 feet (5m).</td>
<td>B/15 or 19.7 feet (6m) whichever is shorter.</td>
</tr>
</tbody>
</table>

Grounding Penetration at any other longitudinal position

<table>
<thead>
<tr>
<th>Longitudinal extent</th>
<th>Transverse extent</th>
<th>Vertical extent from the baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>L/10 or 16.41 feet (5m) whichever is shorter.</td>
<td>16.41 feet (5m).</td>
<td>B/15 or 19.7 feet (6m) whichever is shorter.</td>
</tr>
</tbody>
</table>

Grounding Penetration for Raking Damage

For tank vessels of 20,000 DWT and above, the following assumed bottom raking damage must supplement the damage assumptions:

Longitudinal extent

For vessels of 75,000 DWT and above, 0.6L measured from the forward perpendicular.

Transverse extent

B/3 anywhere in the bottom.

Vertical extent

Breach of the outer hull.

1 Damage applied inboard from the vessel’s side at right angles to the centerline at the level of the summer load line assigned under Subchapter E of this chapter.

1 Whichever results in the more disabling condition.

2 If tanks are partially filled, the permeability must be determined from the actual density and amount of liquid carried.

§ 172.070 Intact stability.

All tank vessels of 5,000 deadweight tons (DWT) and above, contracted after December 3, 2001, must comply with the intact stability requirements of IMO Res. MEPC.117(52) (incorporated by reference, see §172.020).

Subpart E—Special Rules Pertaining to a Barge That Carries a Hazardous Liquid Regulated Under Subchapter O of This Chapter

§ 172.080 Specific applicability.

This subpart applies to each tank barge that carries a cargo listed in Table 151.05 of this chapter.

§ 172.085 Hull type.

If a cargo listed in Table 151.05 of part 151 of this chapter is to be carried, the tank barge must be of the hull type specified in Table 151.05 of this chapter for that cargo.

§ 172.087 Cargo loading assumptions.

(a) The calculations required in this subpart must be done for cargo weights and densities up to and including the maximum that is to be endorsed on the Certificate of Inspection in accordance with §151.04–1(c) of this chapter.

(b) For each condition of loading and operation, each cargo tank must be assumed to have its maximum free surface.

§ 172.090 Intact transverse stability.

(a) Except as provided in paragraph (b) of this section, each tank barge must be shown by design calculations to have a righting arm curve with the following characteristics:

1. If the tank barge is in river service, the area under the righting arm curve must be at least 5 foot-degrees (1.52 meter-degrees) up to the smallest of the following angles: